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D117-762-041
Job Sheet 181942



Part No: D117-762-041

Job Qty: 1 ea

Part Name: Replacement Skidtube



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 8/13/18

Job Tracking No:

Due Date: 8/20/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG D3582 REV E IPP Rev:A 07.06.11 New Issue EC IPP Rev:B 08-02-22 change to revA as per dwg DD verF by:EC IPP REV:C 15.06.11 AS PER CHG002 DD VERF:JLM IPP REV:D 16.02.05 DWG REV:C (ecn16-514) DD VERF:JLM IPP REV:E 17.01.17 as per dwg REV.D DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	8/20/18	8/20/18	0.00	0.00	Start Up Skidtubes-1		BE
130	Skidtubes	1 pcs	8/20/18	8/20/18	0.00	3.47	Skidtubes-1		BE
140	Skidtubes	1 pcs	8/20/18	8/20/18	0.00	3.47	Skidtubes-1		BE
150	QC	1 pcs	8/20/18	8/20/18	0.00	0.00	QC10		38 DAS
160	QC	1 pcs	8/20/18	8/20/18	0.00	0.00	QC5		9-89 38
170	HandFinish	1 pcs	8/20/18	8/20/18	0.00	0.97	HandFinish1		SA 18-07-17
180	QC	1 pcs	8/20/18	8/20/18	0.00	0.00	QC7-1		BE
190	Skidtubes	1 pcs	8/20/18	8/20/18	0.00	3.47	Skidtubes-1		BE DAS
200	QC	1 pcs	8/20/18	8/20/18	0.00	0.00	QC10		38 DAS
210	QC	1 pcs	8/20/18	8/20/18	0.00	0.00	QC5		9-89 38
215	HandFinish	1 pcs	8/20/18	8/20/18	0.00	0.97	HandFinish2		SA 18-07-18
220	Powdercoat	1 pcs	8/20/18	8/20/18	0.00	0.26	Powdercoat1		BE 18-07-19
230	QC	1 pcs	8/20/18	8/20/18	0.00	0.00	QC3		BE 18-07-19
250	HandFinish	1 pcs	8/20/18	8/20/18	0.00	0.97	HandFinish4		DAS
260	QC	1 pcs	8/20/18	8/20/18	0.00	0.00	QC5		SEP 20 2018 68
270	Packaging	1 pcs	8/20/18	8/20/18	0.00	0.00	Packaging3-1		68 9-89
275	DC	1 pcs	8/20/18	8/20/18	0.00	0.00	DC		21 SEP 20 2018
280	QC21-FG	1 Ea	8/20/18	8/20/18	0.00	0.00	QC21		9-89 SEP 20 2018

Part Op 130 - 1-Cut Aft end using DT8185 2-Deburr ends 3-Drill Aft Cap holes using DT8678 *** OPEN AFT CAP HOLE TO .187" Descriptions: *** 4-Locate DT 8973 from aft cap holes & Drill Ground wire hole on top of Tube. 5-Install 3/16 cleco in Ground wire

hole ,then drill all X-Bolt holes using 3/16" drill. 6-Drill pilot holes for wearplates using DT8900 7-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582. 8-Drill holes for D5520-1 doubler using DT10309 A & B, locating from 4th and 5th crossbolt holes from aft using .1875 clekos. Spot drill tube using #20 drill (note 10). Remove DT10309 B. Re-install DT 10309 A-drill thru tube and doubler using #20 drill (note 10), cleco as you go. Remove .1875 clekos and open holes in tube and doubler to 0.750". Remove doublers and identify orientation. 9-Deburr doubler and doubler holes in skid tube. 10-Countersink doubler holes in skid tube as per Dwg. detail J and note 12 -Touch up alodine on D5520-1 doublers. 11-open ground wear holes to 0.391" as per section B-B 12-Open Aft Cap holes using .209" drill. 13-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size. 12-Do not open holes of section G-G to finishes size.

140 - 1-Weld fwd cap D2964 per dwg D3582 and QSI 004 A/R AL ROD Batch 2-Grind flush
190 - ***MASK OFF HOLES OF SECTION F-F (DO NOT C'SINK) 1-Open X-Bolt holes to finish size as per Dwg D3582, sections D-D, E-E, G-G as per Dwg. 2-Counter Sink X-BOLT holes as per Dwg D3582 D-D, E-E and G-G.***Do NOT

countersink holes of section F-F). 3-Deburr and blow out chips from inside of tube, prep. tube for welding. 4-Install doublers using DT10309 B. Shave rivets as required. 5-Bond web as per Dwg D3582 & QSI 015 A/R 241 Sika Flex Batch: 138943 Exp Date: MARCH 2019 6- Swage x-bolt spacer as per dwg and Section F-F QSI002. 7-Weld x-bolt spacers as per Dwg D3582 section D-D, E-E and G-G. A/R AL ROD Batch: 136158 8-Grind welds flush

215 - Touch-up alodine as per QSI

220 - START TIME 8:35 OVEN TEMPERATURE: 320° FINISH TIME: 9:05 M83843

250 - 1-Inspect for Foreign objects 2-Install Aft cap as per Dwg D3582, Detail "C" A/R 241 Sika Flex

Batch: M138870 Exp Date: 14-6 3-Install Wearplates as per Dwg D3582 , Note:Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582 *****Do not install bolts where indicated on Dwg(Note #6)***** 4- Wing Walk as per Dwg D3582 and QSI 005 4.4

270 - Identify and pack for shipping as per PPP D117-762-041 Location :FG081

275 - Photocopy bluefile & type labels per PPP D117-762-041 CHG003

Job BOM

005532

Part / Item	Component Name	Quantity	Operation	Container
D3582-1-BENT	Skidtube Assembly BK117	1 Ea (1 ea)	90-Start up Operation	501946
D5520-1	Doubler	2 Ea (2 ea)	130-Skidtubes	5082762
D2964	Cap	1 Ea (1 ea)	140-Skidtubes	5073380
CR3212-5-05	Rivet	68 pcs (68 ea)	190-Skidtubes	5089456
D2971	Cross Bolt Spacer	1 Ea (1 ea)	190-Skidtubes	5086446
D3584-1	Web	1 Ea (1 ea)	190-Skidtubes	5106746
D3662-1	Crossbolt Spacer	3 Ea (3 ea)	190-Skidtubes	5108712
D3662-3	Crossbolt Spacer	1 Ea (1 ea)	190-Skidtubes	F81606
D5304-1	Crossbolt Spacer	2 Ea (2 ea)	190-Skidtubes	5093587
ALS4-1032-130	Rivnut	36 Ea (36 ea)	250-HandFinish	5067279
ALS4-428-165	Insert	2 Ea (2 ea)	250-HandFinish	5058143
AN3C4A	Bolt	28 Ea (28 ea)	250-HandFinish	5095223
AN4-4A	Bolt	2 Ea (2 ea)	250-HandFinish	5104458
D2965	Cap	1 Ea (1 ea)	250-HandFinish	5045482
D3508-11	Wearplate Aft Center	1 Ea (1 ea)	250-HandFinish	5057794
D3508-13	Wearplate Aft	1 Ea (1 ea)	250-HandFinish	5045060
D3508-3	Wearplate Fwd Center	1 Ea (1 ea)	250-HandFinish	5045056
D3508-9	Wearplate Fwd	1 Ea (1 ea)	250-HandFinish	5089844
D3558-11	Gasket Aft Center	1 Ea (1 ea)	250-HandFinish	5058253
D3558-13	Gasket Aft	1 Ea (1 ea)	250-HandFinish	5088623
D3558-3	Gasket Center Fwd	1 Ea (1 ea)	250-HandFinish	5077347
D3558-9	Gasket Fwd	1 Ea (1 ea)	250-HandFinish	5088626
NAS1149C0332R	Washer	28 Ea (28 ea)	250-HandFinish	5071663
NAS1149D0332J	Washer	2 Ea (2 ea)	250-HandFinish	5100407
NAS1149D0416J	Washer	2 Ea (2 ea)	250-HandFinish	F1131511

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D3582-1-BENT	1	3	0
130-Skidtubes	D5520-1	2	28	0
140-Skidtubes	D2964	1	9	0
190-Skidtubes	CR3212-5-05	68	950	0
	D2971	1	38	0
	D3584-1	1	2	0
	D3662-1	3	10	0
	D3662-3	1	31	0
	D5304-1	2	43	0
250-HandFinish	ALS4-1032-130	36	13,028	0
	ALS4-428-165	2	60	0
	AN3C4A	28	2,819	0
	AN4-4A	2	28	0
	D2965	1	60	0
	D3508-11	1	9	0
	D3508-13	1	11	0
	D3508-3	1	9	0
	D3508-9	1	10	0
	D3558-11	1	9	0
	D3558-13	1	11	0
	D3558-3	1	12	0
	D3558-9	1	12	0

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐									
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval							
Description Work Order Deviation			Disposition								
			Completed By								
			Lead hand / Supervisor Approval Verification								
			QC / QA Coordinator Approval								
Root Cause <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width: 33%;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> <td style="width: 33%;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> </tr> </table>			Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	FAULT CATEGORY <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width: 33%;"> Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="width: 33%;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> </table>			Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
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OTHER :											

NAS1149C0332R	28	4,971	0
NAS1149D0332J	2	2,803	0
NAS1149D0416J	2	2,894	0

Part Specifications

Specifications could not be found.

Plex 8/14/18 7:00 AM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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ITEM	Qty -041	Part Number	Description
	X	D3582-041	SKIDTUBE ASSEMBLY
1	1	D2962-150	EXTRUSION
2	1	D2964	CAP
3	1	D2965	CAP
4	1	D2971	CROSS BOLT SPACER
5	1	D3508-3	WEARPLATE
6	1	D3508-9	WEARPLATE
7	1	D3508-11	WEARPLATE
8	1	D3508-13	WEARPLATE
9	1	D3558-3	GASKET
10	1	D3558-9	GASKET
11	1	D3558-11	GASKET
12	1	D3558-13	GASKET
13	1	D3584-1	WEB
14	3	D3662-1	CROSS BOLT SPACER
15	1	D3662-3	CROSS BOLT SPACER
16	2	D5304-1	CROSS BOLT SPACER
17	2	D5520-1	DOUBLER
18	28	AN3C4A	BOLT
19	2	AN3-5A	BOLT
20	2	AN4-4A	BOLT
21	28	NAS1149C0332R	WASHER (AN960C10L)
22	2	NAS1149D0332J	WASHER (AN960JD10L)
23	2	NAS1149D0416J	WASHER (AN960JD416L)
24	36	AELS-1032-130	INSERT
25	2	ALS7-428-165	INSERT
26	68	CR3212-5-05	CSK RIVET, CHERRY MAX

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 181942 MWS
180804

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB. POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3. ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 18.2 lbs
- 8) WELDING: PER DART QSI 004.
- 9) INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 10) USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- 11) DO NOT INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS IN INDICATED LOCATIONS
- 12) LOCATE QTY (34) HOLES ONTO THE SKIDTUBE PER D5520-1 DOUBLER AND DRILL Ø0.161 THRU SKIDTUBE AND DOUBLER USING DT10309. COUNTERSINK Ø0.286 x 100° (34 PL) PER DOUBLER AND INSTALL EACH D5520-1 DOUBLER USING QTY (34) CR3212-5-05 CSK RIVETS.

RELEASED
2017-08-11
EN 17-547

E	MOVE VIEWS FROM SHT 1 TO SHT 2. ADD ITEMS 17 & 26 AND NOTE 12-13. Ø0.187 HOLE WAS Ø0.75. ADD SHT 3, ADD DETAIL J. SECTION F-F ADD D5520-1. SCALE ON VIEWS WAS 3X.	AJS	17.03.27
D	D5304-1 WAS D2973; REVISE BOM & SECTION F-F & SECTION NOTES (ZN B7-3, A8-3); REF MCR16-6160	RF	17.01.09
C	D3492 PLUG ASSEMBLIES REMOVED. REFORMAT NOTES SHT 1	AP	15.11.02
B	29.86 WAS 29.87 (ZN C2-1), INCORPORATED DEO D3582-A-1 (ZN D5-1), FORMAT TO CURRENT STD	RF	15.02.20
A	NEW ISSUE	PH	07.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC EUGENE, OR	
DRAWN	AJS		
CHECKED	MJS	DRAWING NO.	REV. E
MFG. APPR.	DP	D3582	SHEET 1 OF 4
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	BK 117 SKIDTUBE ASSEMBLY	NTS
DATE	17.03.27	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____

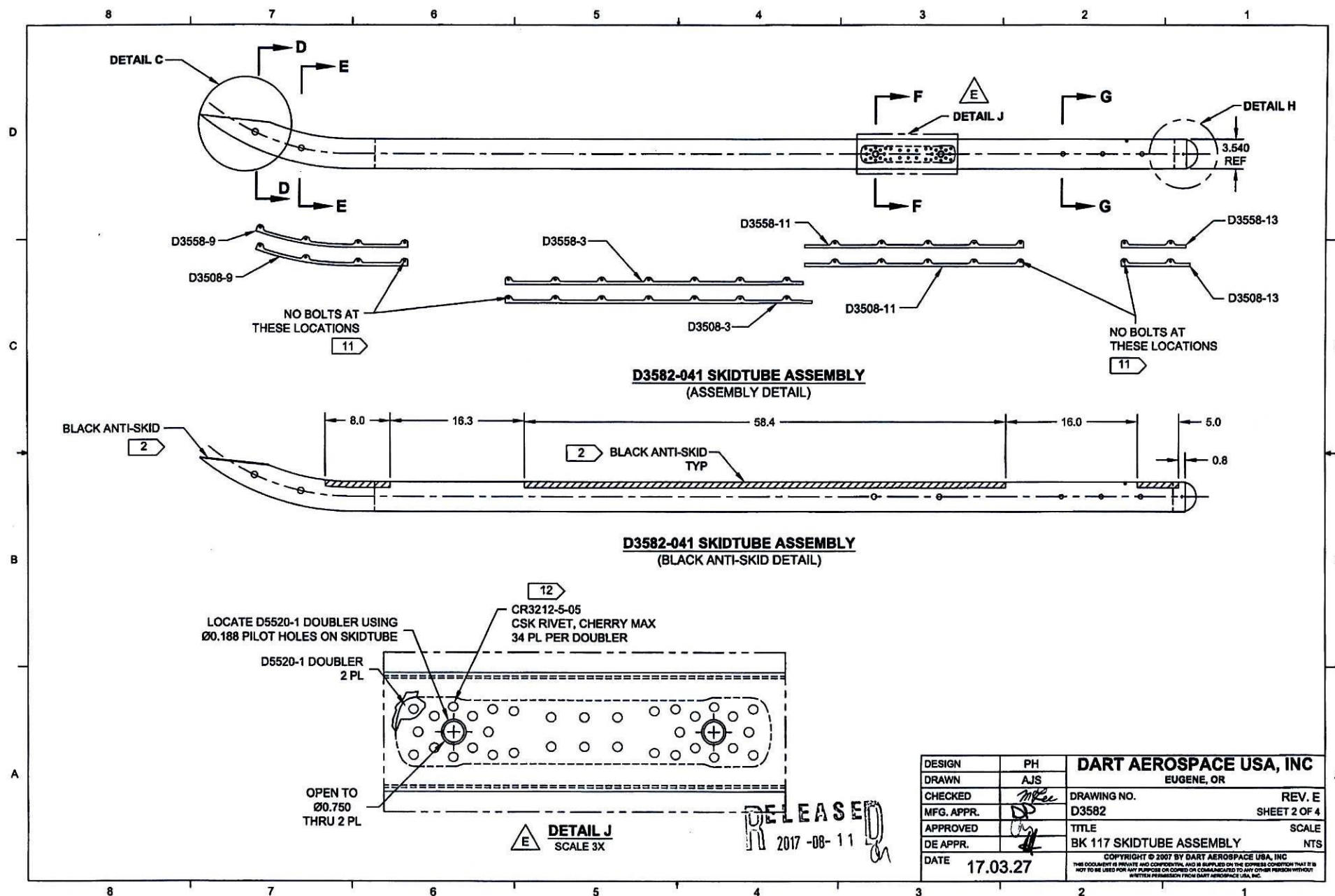


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					



DQA: _____ Date: _____

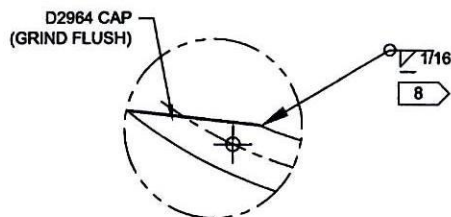


WORK ORDER NON-CONFORMANCE / UPDATE

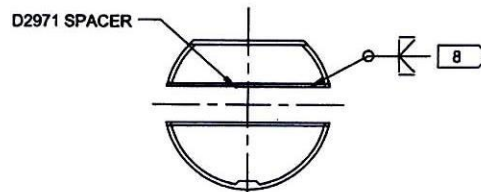
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Work Order update only ☐

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Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

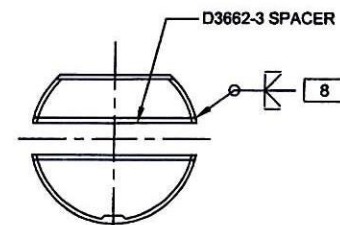


DETAIL C
SCALE 4X



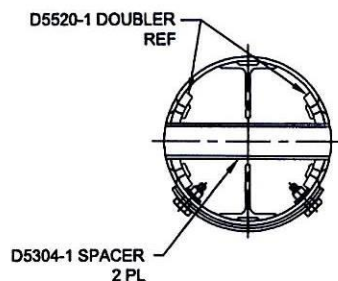
SECTION D-D
SCALE 4X

- SECTION D-D NOTES**
AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:
1. CHAMFER HOLE 0.030 x 45°
 2. INSERT D2971 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. PASS Ø0.750 DRILL TO REMOVE SPILL OVER



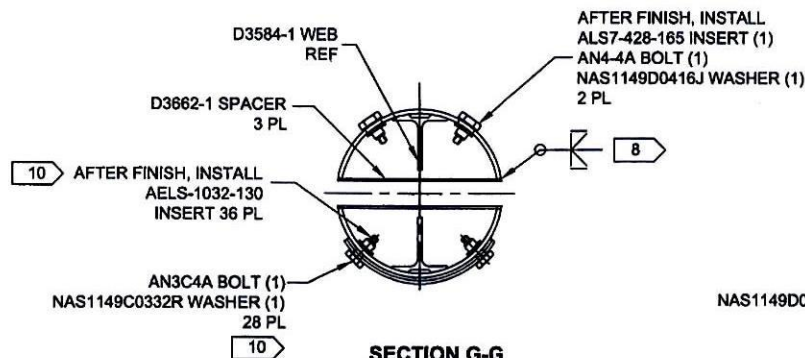
SECTION E-E
SCALE 4X

- SECTION E-E NOTES**
AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:
1. CHAMFER HOLE 0.030 x 45°
 2. INSERT D3662-3 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. PASS Ø0.672 DRILL TO REMOVE SPILL OVER



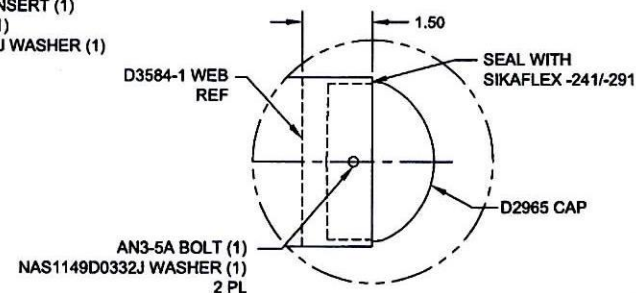
SECTION F-F
SCALE 4X
2 PL

- SECTION F-F NOTES**
AFTER BENDING AND DRILLING ASSY
PERFORM THE FOLLOWING:
1. INSERT D5304-1 SPACER
 2. SWAGE TO Ø0.565 +0.005/-0.000 X 1.0 DEEP PER QSI 002
 3. OPEN THRU HOLE TO Ø0.625
 4. GRIND FLUSH



SECTION G-G
SCALE 4X

- SECTION G-G NOTES**
AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:
1. CHAMFER HOLE 0.030 x 45°
 2. INSERT D3662-1 SPACER (3 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. PASS Ø0.515 DRILL TO REMOVE SPILL OVER



DETAIL H
SCALE 4X

- AFTER FINISH, INSTALL
ALS7-428-165 INSERT (1)
AN4-4A BOLT (1)
NAS1149D0416J WASHER (1)
2 PL

- SEAL WITH
SIKAFLEX -241/-291
- AN3-5A BOLT (1)
NAS1149D0332J WASHER (1)
2 PL

RELEASED
2017-08-11

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	EUGENE, OR	
CHECKED	<i>M. Lee</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>SP</i>	D3582	SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	BK 117 SKIDTUBE ASSEMBLY	NTS
DATE	17.03.27	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC	
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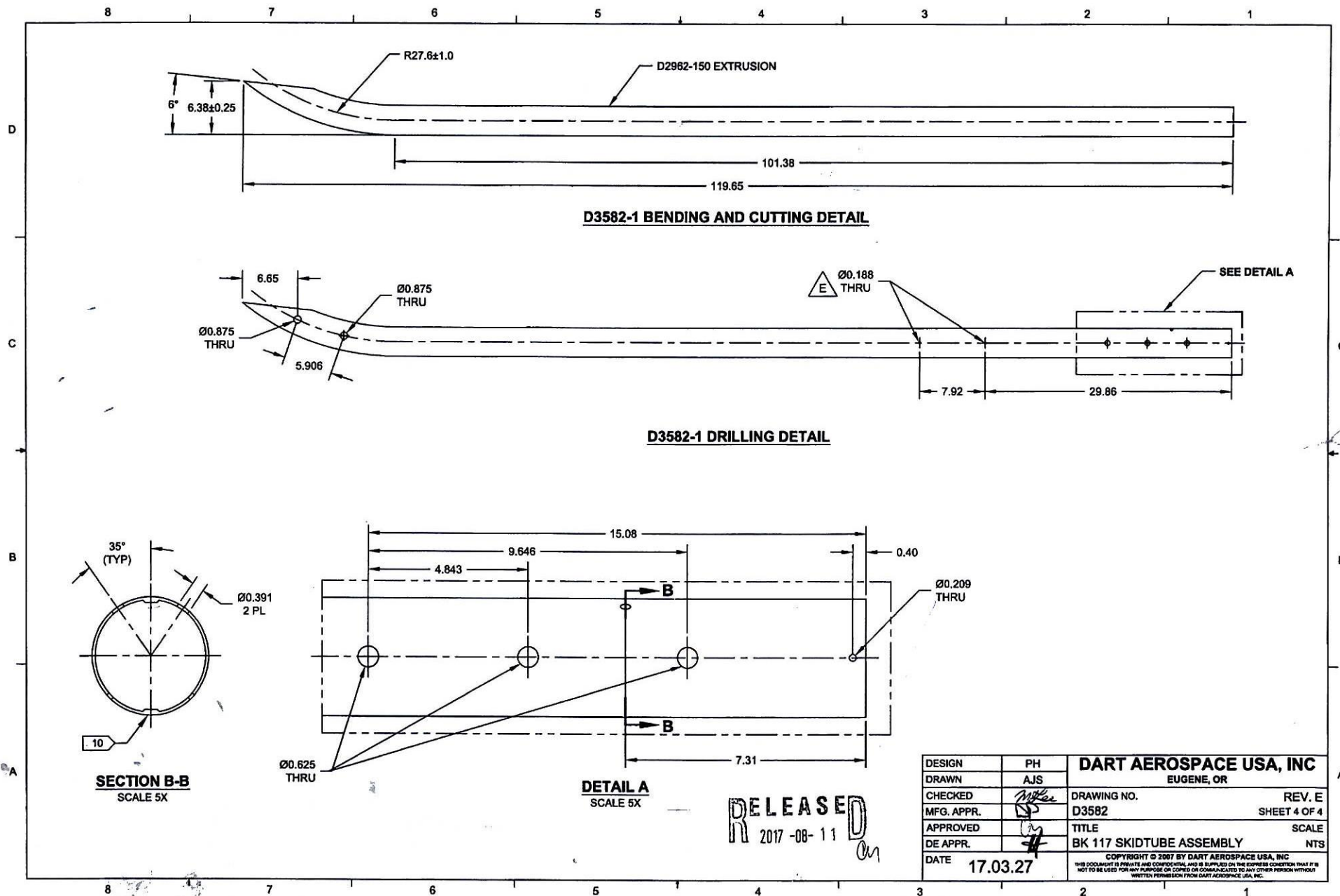
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**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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								Lead hand / Supervisor Approval Verification	
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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																			
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Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																					
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																					
Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																					
Countersink ☐	Off-set ☐	Drawing ☐																																																																					
Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																					
Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																					
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																					
OTHER : _____																																																																							